

Appl. No. 09/871,402  
RCE dated July 18 2005  
Reply to Office Action of May 27, 2005  
Docket No. 6169-226

IBM Docket No. BOC9-2000-0093

### **REMARKS/ARGUMENTS**

These remarks are made in response to the Final Office Action of May 27, 2005 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. This reply is filed as a Request for Continued Examination (RCE) to expedite prosecution and to assure the newly entered amendments are considered.

In the Office Action, the Examiner has rejected claims 1-4 and 7-10 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,812,533 to Cox (Cox) in view of U.S. Patent No. 6,115,040 to Bladow (Bladow). Claims 5-6 and 11-12 have been rejected under 35 U.S.C. § 103(a) over Cox in view of Bladow, in further view of U.S. Patent No. 6,594,355 to Deo (Deo).

#### **I. Claim Amendments**

Claims 1-12 have been amended to clarify various disclosed aspects of the present invention. More specifically, claims 1 and 7 have been amended to include the identifying of the SLEE service component that performs at least one administrative function responsive to an occurrence of an event, which the service component has previously registered within the SLEE to receive.

Claims 1, 4, 7, and 10 have been amended to define the administrative function as including one or more of (1) detecting specified administrative information and posting a message containing the administrative information to an event handling component of the SLEE; (2) reloading the service component within the SLEE; (3) unloading the service component within the SLEE; (4) halting execution of an existing service executing with the service component; and (5) resuming execution of a previously halted service executing within the service component. These amendments are supported by page 12, lines 19-25, page 11, lines 13-16, page 13, lines 1-4, and throughout the specification.

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Dependent claims have been grammatically modified as needed for consistency with the amended independent claim.

Claims 2, 5, 8, and 11 have been amended to emphasize that the administrative function can be option (1) described above. Claims 5 and 11 have also amended to clarify that the remote user can use a Web-based interface containing the hypermedia document to trigger the event, as supported by page 11, lines 17-26.

Claims 3, 6, 9 and 12 has been amended to clarify the meaning of administrative information, as supported by page 9, lines 12-15.

No new matter has been added.

## **II. Overview of Applicants' Claimed Invention**

Prior to addressing the rejections on the art, a brief review of the Applicants' invention is appropriate. The present invention provides a Web-based interface for remotely administering an administrative service component. The service component can execute within a service logic execution environment (SLEE) alongside the SLEE components that are being administered. In one embodiment, the invention can provide this functionality without the aid of specific, external administrative applications or hardware.

According to the claimed invention, individual SLEE service components can perform be self-administering components that responsive to an external command will perform an administrative function and generate administrative information. The external command can originate from the Web-based interface and can initiate a SLEE event. The SLEE even can be an event for which a plurality of service components have registered. A SLEE event handling component can route the event to service components registered for the event. Responsive to receiving the event, the service components can perform one or more administrative functions corresponding to the event. Administrative

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functions can include (1) detecting specified administrative information and posting a message containing the administrative information to an event handling component of the SLEE; (2) reloading the service component within the SLEE; (3) unloading the service component within the SLEE; (4) halting execution of an existing service executing with the service component; and (5) resuming execution of a previously halted service executing within the service component.

### **III. Cox, Bladow, and Combinations Thereof Fail to Explicitly or Implicitly Teach the Claimed Invention**

Claims 1-4 and 7-10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Cox (Cox) in view of Bladow.

#### **A. Overview of Cox**

Cox discloses a software development tool to be used at design time to generate components capable of executing within a SLEE or executing within a virtual network linked a physical network including a SLEE. Cox teaches that a Service Creation Environment (SCE 160) can be used to generate components capable of executing within a SLEE. The SCE can include a set of software tools which can be used to create software objects. These software objects can include components deployable within a SLEE or components deployable within a virtual network.

#### **B. Overview of Bladow**

Bladow details a GUI that maintains session management information.

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### **C. Cox and Bladow Fail to Teach Claimed Limitations**

Conventionally, SLEE components perform low-level telephony actions. A SLEE relieves the individual service components of conventional lifecycle responsibilities by providing portable support for transactions, persistence, load balancing, security, and object connection instance pooling, thereby permitting service components to focus upon providing telephony services (page 5, lines 4-7).

Conventional administrative operations are performed by separate administrative systems located outside the SLEE architecture. Since these systems are separately implemented at the application layer, the administrative system must monitor the input and outputs from multiple low-level functions occurring within the service layer of the SLEE, interfacing through the protocol layer and signaling layer. This conventional approach consumes significant resources and forces the administrative systems to use those functions and API interfaces provided by the SLEE.

For example, to monitor the usage of a service component, the inputs and outputs sent to the service component would have to be intercepted (potentially at the application layer, protocol layer, or signaling layer since lower level interception may not be permitted), transmitted to the administrative system, and processed. Based upon the processed data, the administrative system can approximate service component usage. This method relies upon an approximation, because data because load balancing and instance pooling occurs automatically within higher level SLEE components, so the loads and usage of individual service components are generally made available to the administrative system (operating at the application layer, which is two layers removed from the service layer, and where operations within service components are abstracted again from external snooping using SLEE management software. Additionally, security interfaces implemented at the SLEE layer can make low-level service component administration functions

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The Applicants' solution is to provide "low level" administrative functionality within the service components themselves, thereby allowing the service components to be self-administering units, which is not normally possible. Thus, new administrative functions can be written for the service components and can be associated with events that trigger these administrative functions. Cox provides no such teachings, but instead performs "administrative functions" if defined broadly using conventional techniques.

Referring to the claimed limitations, Cox fails to teach that service components register for events and internally execute administrative functions responsive to the occurrence of these events, where administrative functions are defined as including at least one of: (1) detecting specified administrative information and posting a message containing the administrative information to an event handling component of the SLEE; (2) reloading the service component within the SLEE; (3) unloading the service component within the SLEE; (4) halting execution of an existing service executing with the service component; and (5) resuming execution of a previously halted service executing within the service component.

In the Office Action, the Examiner has stated that the registration for administrative events is implied by Cox (page 2 based upon column 4, lines 26-35) in order for Cox to have utility. While it is true that some events must be registered by the SLEE, conventional teachings fail to teach events triggering administrative functions to execute within a SLEE. Instead, conventional teachings teach that telephony events (for which the service components are associated) are the type of events that service components are registered for. Attempting to imply a new type of event is a significant departure from conventional wisdom (again lifecycle, security, load balancing, instance pooling ... are all conventionally performed at a higher level of interaction than the SLEE component level since they are automatically handled by the SLEE for the individual components) and is not supported by teachings present within Cox.

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Conventionally, events triggering administrative functions are not routed using an event handling component of the SLEE. Instead, administrative functions are generally performed at the application layer, based upon data obtained by administrative systems interfacing with the telephony switch at the application layer. Any interfaces occurring between the administrative systems and the SLEE at the service layer, are based upon parameters and data maintained by the SLEE and used by the SLEE to perform load balancing, security, instance pooling, etc. The SLEE components do not conventionally provide this administrative information nor do they perform administrative functions as claimed. The Examiner has implied this behavior from column 33, lines 16-20 and column 4, lines 5-7, which fail to provide teachings regarding SLEE SERVICE COMPONENTS performing administrative functions.

Applicants emphasize that they are not aware of this teaching being taught by any references that can be applied against their invention. Conventional wisdom at the time of the invention taught away from the Applicants' claimed methodology. Cox and Bladow lack teachings specifically directed to how administrative functions are performed at the service layer. Applicants therefore assert that in absence of explicit teachings to the contrary, conventional techniques were contemplated by Cox, Bladow, and combinations thereof instead of the novel teachings claimed by the Applicants.

Applicants claim that an administrative option of a hypermedia document corresponds to one of the administrative functions executed within a SLEE service component. This limitation infers that external applications using the hypermedia document can directly trigger the administrative functions of SLEE service components. This relationship between the hypermedia document and the SLEE component permits administrative functionality to be provided without the aid of a separate and distinct administrative system (page 6, lines 7-9). Cox and Bladow individually and in combination fail to explicitly or implicitly provide this teaching.

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In summary, Cox, Bladow, and combinations thereof fail to explicitly or implicitly teach SLEE service components that execute administrative functions as claimed. Cox, Bladow, and combinations thereof fail to explicitly or implicitly teach that an administrative event is routed by an event handler of the SLEE for distribution to registered components of the SLEE. Cox, Bladow, and combinations thereof fail to explicitly or implicitly teach that an administrative option of a hypermedia document corresponds to an administrative function executed within a SLEE component.

Since Cox, Bladow, and combinations thereof fail to explicitly or implicitly teach each claimed limitation of claims 1-4 and 7-10, a withdrawal of the rejections to these claims is respectfully requested.

#### **IV. Deo Fails to Cure the Deficiencies of Cox and Bladow**

Claims 5-6 and 11-12 have been rejected under 35 U.S.C. § 103(a) over Cox in view of Bladow, in further view of Deo. Deo teaches a novel method of performing services in response to service requests within an intelligent network. Deo fails to cure the deficiencies of Cox and Bladow regarding administrative functions (as claimed) occurring within SLEE service components and/or having administrative options of hypermedia document corresponding to triggerable (from the administrative options) administrative functions executing within SLEE service components.

Since Cox, Bladow, Deo and combinations thereof fail to explicitly or implicitly teach each claimed limitation of claims 5-6 and 11-12, a withdrawal of the rejections to these claims is respectfully requested.

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the

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Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

Date: 18 July 2005



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